

National Aeronautics and
Space Administration



EXPLORESCIENCE

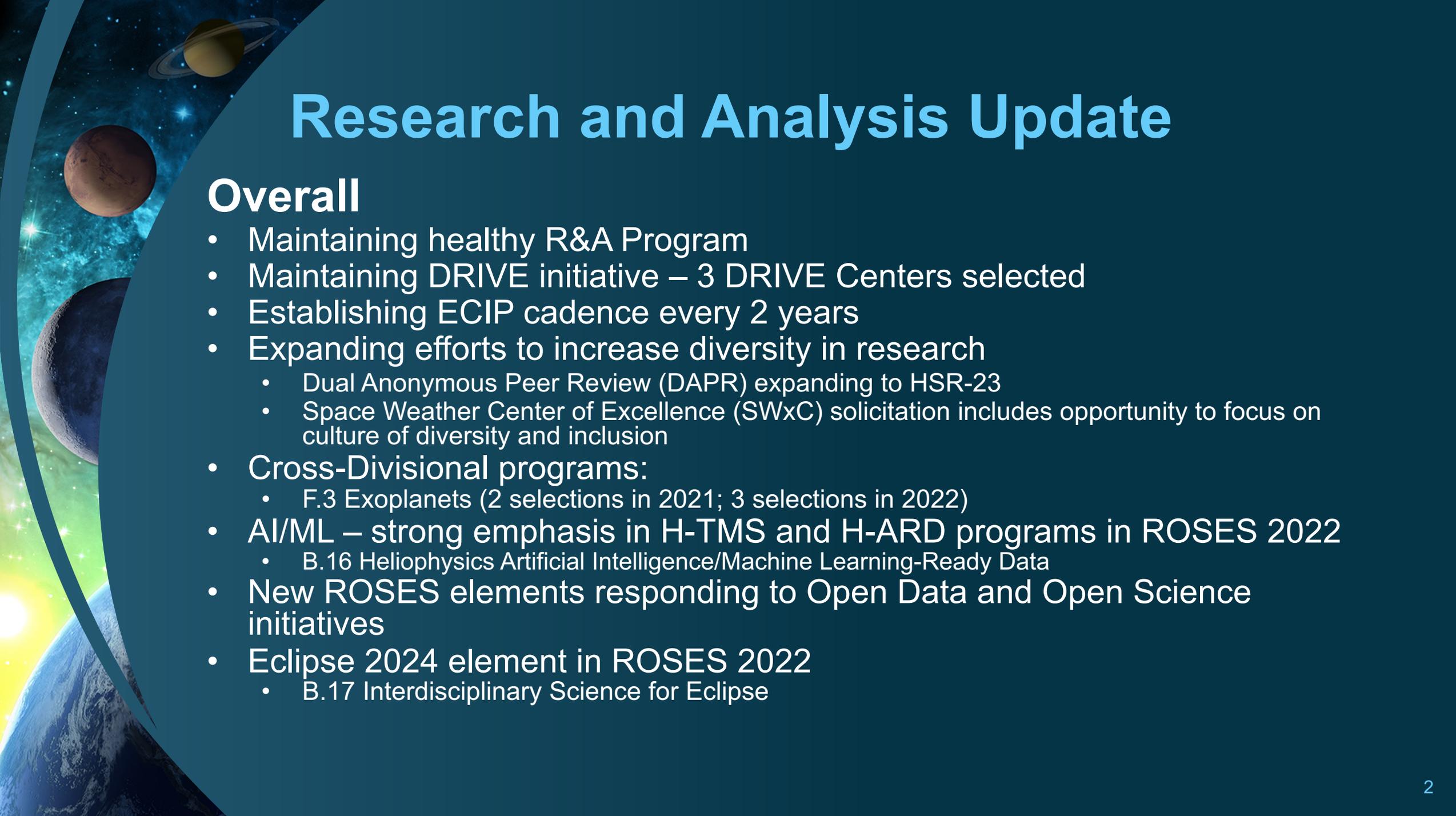
R&A Status

September 21, 2022

Patrick Koehn

R&A Lead



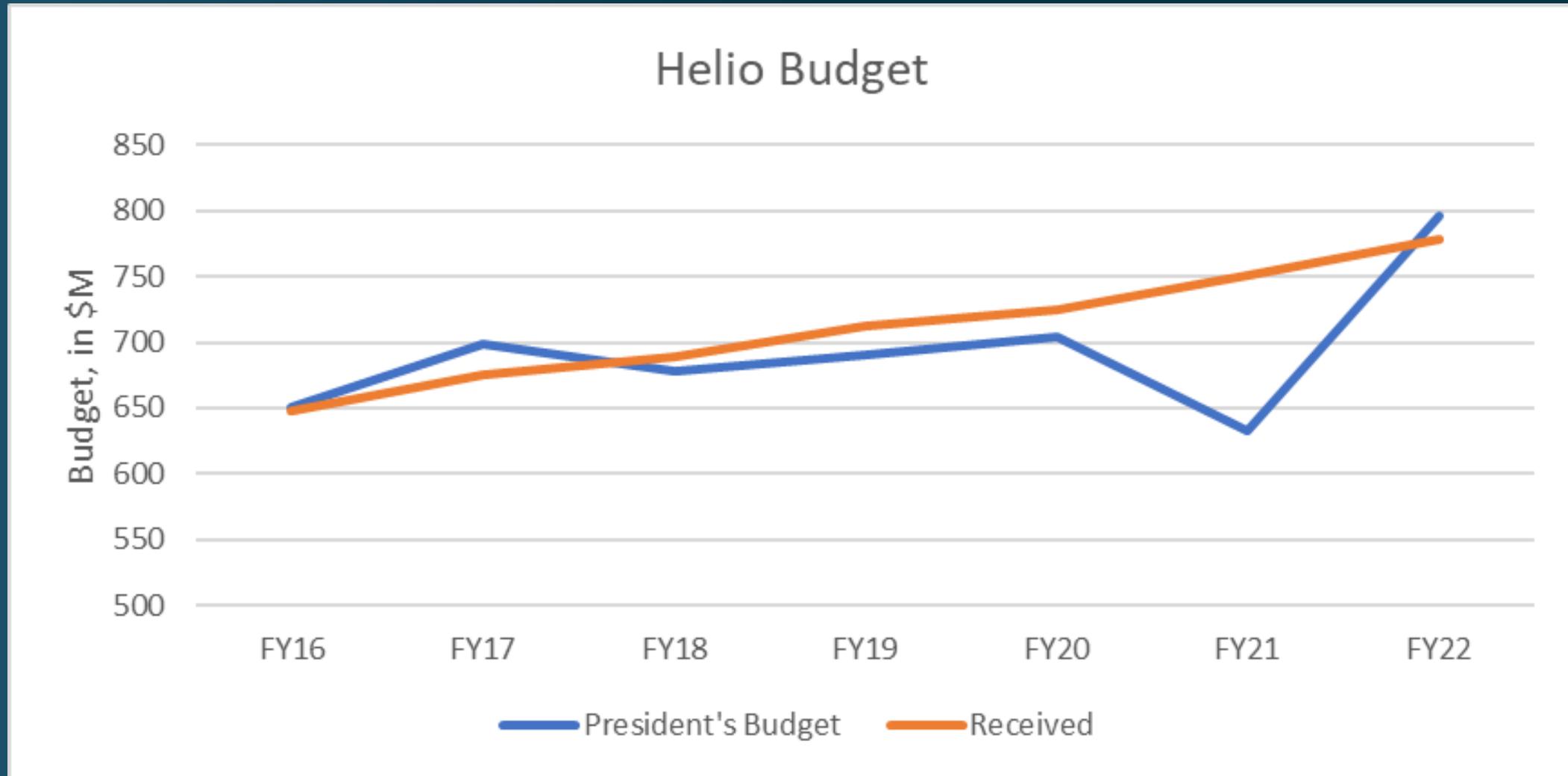


Research and Analysis Update

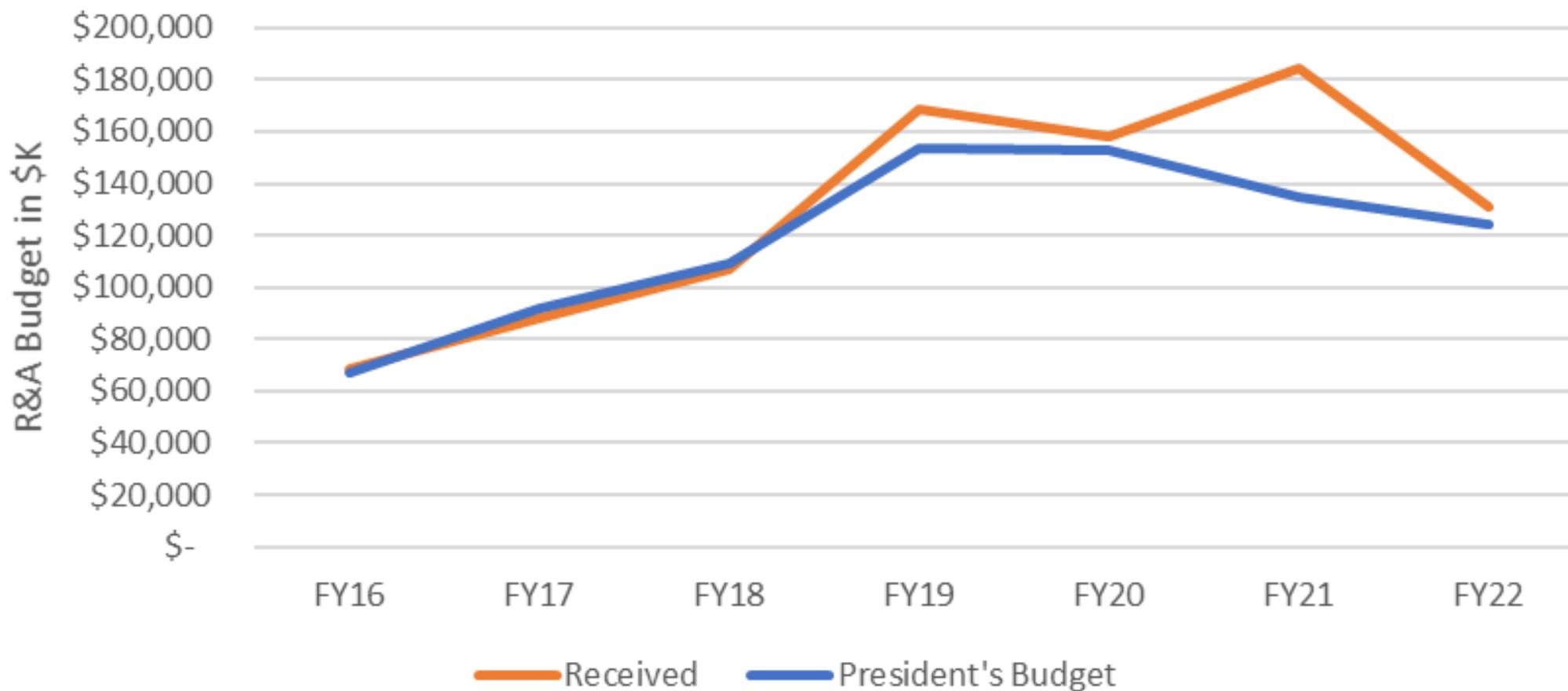
Overall

- Maintaining healthy R&A Program
- Maintaining DRIVE initiative – 3 DRIVE Centers selected
- Establishing ECIP cadence every 2 years
- Expanding efforts to increase diversity in research
 - Dual Anonymous Peer Review (DAPR) expanding to HSR-23
 - Space Weather Center of Excellence (SWxC) solicitation includes opportunity to focus on culture of diversity and inclusion
- Cross-Divisional programs:
 - F.3 Exoplanets (2 selections in 2021; 3 selections in 2022)
- AI/ML – strong emphasis in H-TMS and H-ARD programs in ROSES 2022
 - B.16 Heliophysics Artificial Intelligence/Machine Learning-Ready Data
- New ROSES elements responding to Open Data and Open Science initiatives
- Eclipse 2024 element in ROSES 2022
 - B.17 Interdisciplinary Science for Eclipse

Total HPD Budget

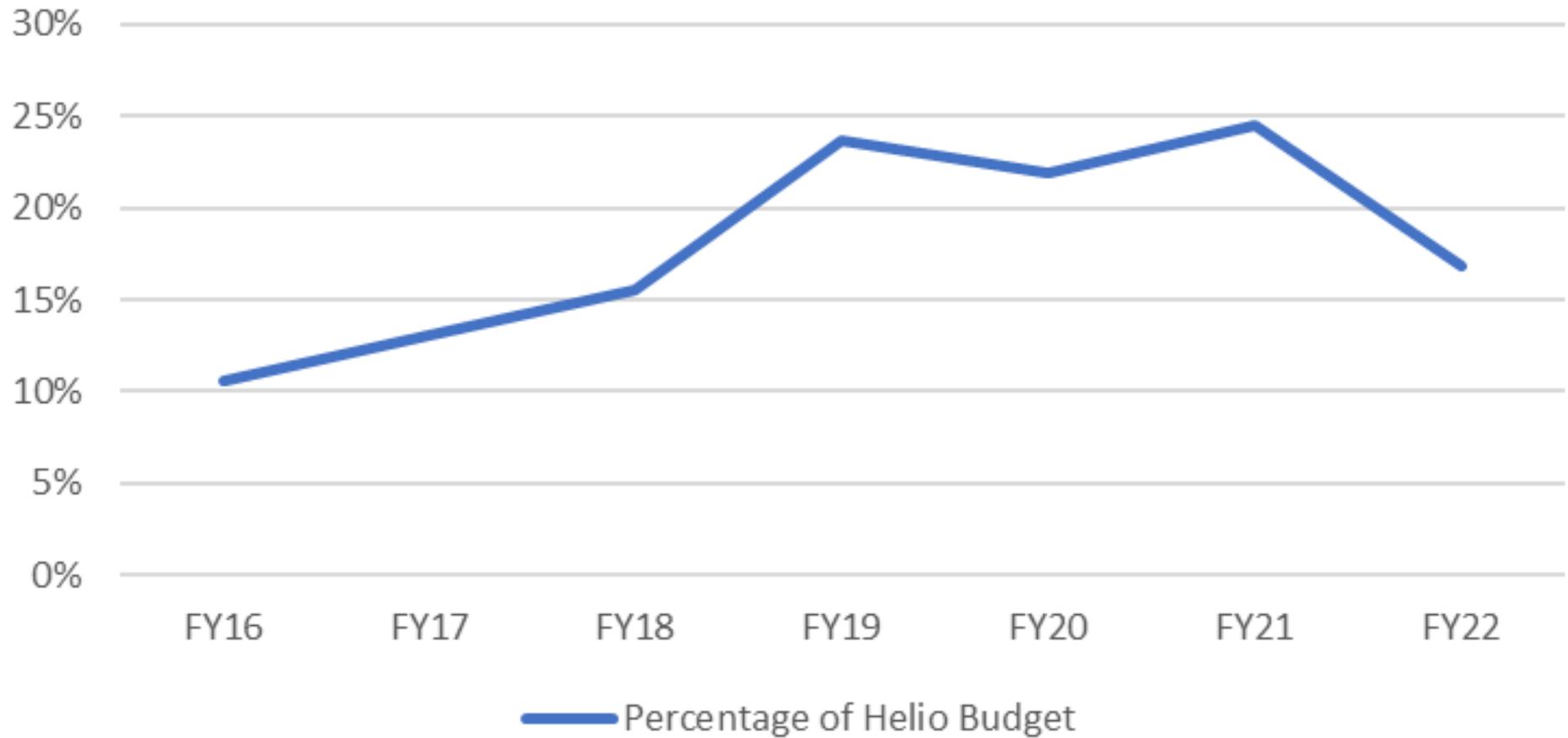


R&A Appropriations





R&A Percentage of Helio Budget



Funding Profile for Selected Groups

| | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Open Research | \$ 29,356,091 | \$ 29,991,030 | \$ 42,165,062 | \$ 51,278,617 | \$ 49,283,554 | \$ 43,247,646 | \$ 28,124,751 |
| Targeted Research | \$ 18,441,000 | \$ 18,027,030 | \$ 38,391,587 | \$ 31,770,449 | \$ 20,284,237 | \$ 34,568,423 | \$ 26,359,072 |
| Flight Tech | \$ 21,019,875 | \$ 23,920,853 | \$ 34,781,950 | \$ 52,487,099 | \$ 38,870,222 | \$ 46,985,806 | \$ 24,104,529 |

| | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 |
|-------------------|------|------|------|------|------|------|------|
| Open Research | 43% | 42% | 37% | 38% | 45% | 35% | 36% |
| Targeted Research | 27% | 25% | 33% | 23% | 19% | 28% | 34% |
| Flight Tech | 31% | 33% | 30% | 39% | 36% | 38% | 31% |

Open Research programs: HTMS, HSR, HGIO, HECIP

Targeted Research programs: LWS-SC, LWS-Science, SWSA-O2R2O

Flight Tech: HTIDS, LCAS, HFOS, HFORT, HDEE, H-USPI, HMCS

Selections and Submissions for Selected Groups

| | | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 |
|-------------------|-----------|------|------|------|------|------|------|
| Open Research | Submitted | 407 | 334 | 310 | 304 | 291 | 187 |
| | Selected | 107 | 76 | 70 | 74 | 86 | 49 |
| Targeted Research | Submitted | 64 | 117 | 116 | 113 | 94 | 93 |
| | Selected | 21 | 29 | 35 | 41 | 36 | 29 |
| Flight Tech | Submitted | 71 | 88 | 74 | 57 | 69 | 106 |
| | Selected | 16 | 34 | 28 | 26 | 31 | 36 |

| | | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 |
|-------------------|----------|------|------|------|------|------|------|
| Open Research | Selected | 26% | 23% | 23% | 24% | 30% | 26% |
| Targeted Research | Selected | 33% | 25% | 30% | 36% | 38% | 31% |
| Flight Tech | Selected | 23% | 39% | 38% | 46% | 45% | 34% |

The background of the slide is a composite image of space. The top half features a dark blue and black nebula with bright, star-like points of light. The bottom half features a bright orange and yellow nebula with a dense field of stars. A dark blue horizontal band runs across the middle, containing the word "Backup" in white text.

Backup

2022 Research and Analysis Program Elements

- HLCAS: Low Cost Access to Space
- HFOS: Flight Opportunity Studies
- HFORT: Flight Opportunities for Research and Technology
- HTIDS: Technology and Instrument Development for Science
- HGIO: Guest Investigator
- HSR: Supporting Research
- HTMS: Theory, Modeling and Simulation
- Early Career Investigator Program (ECIP) & FINESST
- Living With a Star (LWS) Science
- Space Weather R2O2R and Science Centers
- Data Environment Enhancement/Tools and Methods
- HITS: Heliophysics Innovation in Technology and Science
- Eclipse 2024
- Citizen Science